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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/751,631

01/06/2004

Kazushige Takechi

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23373

7590

10/19/2006

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EXAMINER

NGUYEN, JOSEPH H

ART UNIT

PAPER NUMBER

2815

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/751,631	Applicant(s) TAKECHI, KAZUSHIGE	
	Examiner Joseph Nguyen	Art Unit 2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,27,28 and 30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,27,28 and 30 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-6 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takayama et al. (US 2003/0089913A1) in view of Burroughes et al. (US 6592969 B1).

Regarding claim 1, Takayama et al. discloses in figures 10 (showing the same embodiment) a flexible electronic device comprising a flexible film 201 (film 210 if formed of plastic which is flexible (para [0102])); a substrate 202 disposed on the flexible film, the substrate being different from the material of said flexible film (element 202 is a film insulating element 201 and thus element 202 must be different from the material of element 201 (para [0102])); and an electrically active thin film device (figure 10E) wherein an electrically active layer 203 (para [0104]) of the electrically active thin film device is disposed directly on the substrate 202. It is noted that element 202 is a thin supporting material on which a thin film transistor is formed, as such can be construed as "substrate".

Takayama et al. does not disclose the thickness of the substrate being larger than 0 μm and not larger than 200 μm . However, Burroughes et al. discloses the

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thickness of the substrate is less than 100 μm (larger than 0 μm and not larger than 200 μm) to form a flexible electronic device (col. 1, lines 26-30). In view of such teaching, it would have been obvious at the time of the present invention to modify Takayama et al. by including thickness of the substrate being larger than 0 μm and not larger than 200 μm to form a flexible electronic device.

Regarding claim 3, Takayama et al. discloses in figure 10C the thin film device comprises a thin film transistor formed of a silicon thin film (para [0106]).

Regarding claim 4, Takayama et al. discloses the substrate 202 is an insulating substrate (para [0102]).

Regarding claim 5, substrate 4 as shown in figure 1 of Burroughes et al. is formed of glass (col. 6, line 12), which is an insulating material.

Regarding claim 6, Takayama et al. discloses in figure 10A the flexible film 201 is plastic (para [0102]).

Claims 7, 28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takayama et al. and Burroughes et al. in view of Ishida (US 4,661,428).

Regarding claims 7, 28 and 30, Takayama et al. and Burroughes et al. disclose substantially all the structure set forth in the claimed invention except the flexible film having a thermal conductivity higher than 0.01 W/cm deg. Note that Takayama et al. discloses the flexible film 201 is formed of plastic (para [0102]) and applicant discloses a copper film has a thermal conductivity of 4.0 W/cm deg, which is higher than 0.01 W/cm deg (col. 11, lines 19-20). However, Ishida discloses the flexible film can be

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formed of plastic or copper (col. 4, lines 51-56). In view of such teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Takayama et al. and Burroughes et al. by having the flexible film formed of copper, which has a thermal conductivity higher than 0.01 W/cm deg because copper and plastic were art equivalents recognized.

Response to Arguments

Applicant's arguments with respect to claims 1, 3-7, 27-28 and 30 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

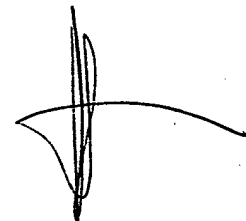
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Nguyen whose telephone number is (571) 272-1734. The examiner can normally be reached on Monday-Friday, 7:30 am- 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Parker can be reached on (571) 272-2298. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300 for regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JN
October 16, 2006.

A handwritten signature in black ink, appearing to be 'KENNETH PARKER', written over a horizontal line.

**KENNETH PARKER
SUPERVISORY PATENT EXAMINER**